JOURNAL OF THERMOPHYSICS AND HEAT TRANSFER
Vol. 14, No. 4, October–December 2000

2000 *Journal of Thermophysics and Heat Transfer* Index

How to Use the Index

In the Subject Index, pages 616–619, each technical paper is listed under a maximum of three appropriate headings. Note the locating number in boldface type preceding each paper title, and use that number to find the paper in the Chronological Index. The Author Index, page 620, lists all authors associated with a given technical paper. The locating numbers are identical to those in the Subject Index. The Chronological Index, pages 621–624, also lists all papers by their locating numbers. This listing contains titles, authors and their affiliations, and volume, issue number, and page where the paper appeared. It also gives the AIAA paper number, if any, on which the article was based, as well as the ISBN number if the paper was published in a bound collection of meetings papers. Comments, Replies, and Errata are listed directly beneath the paper to which they refer. If the paper to which they refer was published prior to 2000, that paper also will appear in both the Subject and Chronological Indexes. Authors of Comments also are listed in the Author Index.

Subject Index

Aircraft Technology, Conventional, STOL/VTOL

Aerodynamics

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection
T00-070 Estimation Methods for Two-Dimensional Conduction Effects of Shock-Shock Heat Fluxes

Weather Hazards

T00-047 Heat Transfer Coefficient Measurement on Iced Airfoil in Small Icing Wind Tunnel

Energy

Laser Integration/Systems

T00-051 Cooling Mechanism of Expanding Plasmas Produced by Optical-Field-Induced Ionization

Magnetohydrodynamic Power Generation

T00-052 Energy Partitions in Inductively Heated Plasma Sources for Reentry Simulations

Reciprocating Machinery

T00-074 Friction Factor and Nusselt Number for Thermoacoustic Transport Phenomena in a Tube

Stirling Engine

T00-074 Friction Factor and Nusselt Number for Thermoacoustic Transport Phenomena in a Tube

Fluid Dynamics

Boundary Layers and Heat Transfer—Laminar

T00-011 Graetz Problem for the Conjugated Conduction-Film Condensation Process
T00-046 Transient Analysis of Forced Convection Along a Wavy Surface in Micropolar Fluids

Boundary Layers and Heat Transfer—Turbulent

T00-083 Variational-Iterative Method for Conductive-Radiative Heat Transfer in Spherical Inhomogeneous Medium

Computational Fluid Dynamics

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection
T00-002 Computational Study of Vibrationally Relaxing Gas past Blunt Body in Hypersonic Flows
T00-081 Computations of Incompressible Flows with Natural Convection Using Pseudocompressibility Approach
T00-003 Coupled Dual Reciprocity Boundary Element/Finite Volume Method for Transient Conjugate Heat Transfer
T00-050 Direct Simulation Methods for Low-Speed Microchannel Flows
T00-048 Effects of Heat Source Arrangements on Marangoni Convection in Electrostatically Levitated Droplets
T00-034 Effects of the Centrifugal Forces on a Gas Between Rotating Cylinders
T00-053 Modeling of Gas Cloud Expansion at High Altitude with Radiation Transport
T00-030 Multispectral Shock-Layer Radiance from a Hypersonic Slender Body
T00-025 Near-Wall Second-Moment Closure for Rotating Multiple-Pass Cooling Channels
T00-057 Nonlinear Time-Step Constraints Based on the Second Law of Thermodynamics

Hypersonic Flow

T00-056 Ablation Onset in Unsteady Hypersonic Flow About Nose Tip with Cavity
T97-004 Comment on "Different Levels of Modeling for Diffusion Phenomena in Neutral and Ionized Mixtures"
T00-002 Computational Study of Vibrationally Relaxing Gas past Blunt Body in Hypersonic Flows
T00-070 Estimation Methods for Two-Dimensional Conduction Effects of Shock-Shock Heat Fluxes
T00-054 Gas Dynamic Equations, Transport Coefficients, and Effects in Nonequilibrium Diatomic Gas Flows
T00-028 Measurement of Shock Standoff Distance for Sphere in Ballistic Range
T00-055 Model for Heterogeneous Catalysis on Metal Surfaces with Applications to Hypersonic Flows
T00-030 Multispectral Shock-Layer Radiance from a Hypersonic Slender Body
T00-032 Navier—Stokes Computation of Flows in Arc Heaters

Inlet, Nozzle, Diffuser, and Channel Flows

T00-050 Direct Simulation Methods for Low-Speed Microchannel Flows
T00-007 Experimental Analysis of Combusting Flows Developing over a Plane- Symmetric Expansion
T00-055 Model for Heterogeneous Catalysis on Metal Surfaces with Applications to Hypersonic Flows

Multiphase Flows

T00-006 Critical Behavior in Small Particle Combustion
T00-075 Robust Heat Transfer Correlation for Turbulent Gas-Liquid Flow in Vertical Pipes

Plasmadynamics and MHD

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection

JOURNAL OF THERMOPHYSICS AND HEAT TRANSFER
Vol. 14, No. 4, October–December 2000

2000 *Journal of Thermophysics and Heat Transfer* Index

How to Use the Index

In the Subject Index, pages 616–619, each technical paper is listed under a maximum of three appropriate headings. Note the locating number in boldface type preceding each paper title, and use that number to find the paper in the Chronological Index. The Author Index, page 620, lists all authors associated with a given technical paper. The locating numbers are identical to those in the Subject Index. The Chronological Index, pages 621–624, also lists all papers by their locating numbers. This listing contains titles, authors and their affiliations, and volume, issue number, and page where the paper appeared. It also gives the AIAA paper number, if any, on which the article was based, as well as the ISBN number if the paper was published in a bound collection of meetings papers. Comments, Replies, and Errata are listed directly beneath the paper to which they refer. If the paper to which they refer was published prior to 2000, that paper also will appear in both the Subject and Chronological Indexes. Authors of Comments also are listed in the Author Index.

Subject Index

Aircraft Technology, Conventional, STOL/VTOL

Aerodynamics

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection
T00-070 Estimation Methods for Two-Dimensional Conduction Effects of Shock-Shock Heat Fluxes

Weather Hazards

T00-047 Heat Transfer Coefficient Measurement on Iced Airfoil in Small Icing Wind Tunnel

Energy

Laser Integration/Systems

T00-051 Cooling Mechanism of Expanding Plasmas Produced by Optical-Field-Induced Ionization

Magnetohydrodynamic Power Generation

T00-052 Energy Partitions in Inductively Heated Plasma Sources for Reentry Simulations

Reciprocating Machinery

T00-074 Friction Factor and Nusselt Number for Thermoacoustic Transport Phenomena in a Tube

Stirling Engine

T00-074 Friction Factor and Nusselt Number for Thermoacoustic Transport Phenomena in a Tube

Fluid Dynamics

Boundary Layers and Heat Transfer—Laminar

T00-011 Graetz Problem for the Conjugated Conduction-Film Condensation Process
T00-046 Transient Analysis of Forced Convection Along a Wavy Surface in Micropolar Fluids

Boundary Layers and Heat Transfer—Turbulent

T00-083 Variational-Iterative Method for Conductive-Radiative Heat Transfer in Spherical Inhomogeneous Medium

Computational Fluid Dynamics

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection
T00-002 Computational Study of Vibrationally Relaxing Gas past Blunt Body in Hypersonic Flows
T00-081 Computations of Incompressible Flows with Natural Convection Using Pseudocompressibility Approach
T00-003 Coupled Dual Reciprocity Boundary Element/Finite Volume Method for Transient Conjugate Heat Transfer
T00-050 Direct Simulation Methods for Low-Speed Microchannel Flows
T00-048 Effects of Heat Source Arrangements on Marangoni Convection in Electrostatically Levitated Droplets
T00-034 Effects of the Centrifugal Forces on a Gas Between Rotating Cylinders
T00-053 Modeling of Gas Cloud Expansion at High Altitude with Radiation Transport
T00-030 Multispectral Shock-Layer Radiance from a Hypersonic Slender Body
T00-025 Near-Wall Second-Moment Closure for Rotating Multiple-Pass Cooling Channels
T00-057 Nonlinear Time-Step Constraints Based on the Second Law of Thermodynamics

Hypersonic Flow

T00-056 Ablation Onset in Unsteady Hypersonic Flow About Nose Tip with Cavity
T97-004 Comment on "Different Levels of Modeling for Diffusion Phenomena in Neutral and Ionized Mixtures"
T00-002 Computational Study of Vibrationally Relaxing Gas past Blunt Body in Hypersonic Flows
T00-070 Estimation Methods for Two-Dimensional Conduction Effects of Shock-Shock Heat Fluxes
T00-054 Gas Dynamic Equations, Transport Coefficients, and Effects in Nonequilibrium Diatomic Gas Flows
T00-028 Measurement of Shock Standoff Distance for Sphere in Ballistic Range
T00-055 Model for Heterogeneous Catalysis on Metal Surfaces with Applications to Hypersonic Flows
T00-030 Multispectral Shock-Layer Radiance from a Hypersonic Slender Body
T00-032 Navier—Stokes Computation of Flows in Arc Heaters

Inlet, Nozzle, Diffuser, and Channel Flows

T00-050 Direct Simulation Methods for Low-Speed Microchannel Flows
T00-007 Experimental Analysis of Combusting Flows Developing over a Plane- Symmetric Expansion
T00-055 Model for Heterogeneous Catalysis on Metal Surfaces with Applications to Hypersonic Flows

Multiphase Flows

T00-006 Critical Behavior in Small Particle Combustion
T00-075 Robust Heat Transfer Correlation for Turbulent Gas-Liquid Flow in Vertical Pipes

Plasmadynamics and MHD

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection

T97-004 Comment on "Different Levels of Modeling for Diffusion Phenomena in Neutral and Ionized Mixtures"
T00-051 Cooling Mechanism of Expanding Plasmas Produced by Optical-Field-Induced Ionization
T00-052 Energy Partitions in Inductively Heated Plasma Sources for Reentry Simulations

Rarefied Flows

T00-006 Critical Behavior in Small Particle Combustion
T00-050 Direct Simulation Methods for Low-Speed Microchannel Flows
T00-034 Effects of the Centrifugal Forces on a Gas Between Rotating Cylinders
T00-054 Gas Dynamic Equations, Transport Coefficients, and Effects in Nonequilibrium Diatomic Gas Flows

Reacting Flows and Combustion

T97-004 Comment on "Different Levels of Modeling for Diffusion Phenomena in Neutral and Ionized Mixtures"
T00-006 Critical Behavior in Small Particle Combustion
T00-007 Experimental Analysis of Combusting Flows Developing over a Plane- Symmetric Expansion
T00-005 Experimental Investigation of Surface Reactions in Carbon Monoxide and Oxygen Mixtures
T00-060 Influence of O2 (v)+N=NO+O on NO Formation in One-Dimensional Air Nozzle Flow
T00-030 Multispectral Shock-Layer Radiance from a Hypersonic Slender Body

Separated Flows

T00-077 Measurements and Predictions of Turbulent Natural Convection Adjacent to Backward-Facing Step

Shock Waves and Detonations

T00-057 Nonlinear Time-Step Constraints Based on the Second Law of Thermodynamics

Subsonic Flow

T00-007 Experimental Analysis of Combusting Flows Developing over a Plane- Symmetric Expansion

Supersonic Flow

T00-003 Coupled Dual Reciprocity Boundary Element/Finite Volume Method for Transient Conjugate Heat Transfer
T00-060 Influence of O2 (v)+N=NO+O on NO Formation in One-Dimensional Air Nozzle Flow
T00-057 Nonlinear Time-Step Constraints Based on the Second Law of Thermodynamics

Unsteady Flows

T00-056 Ablation Onset in Unsteady Hypersonic Flow About Nose Tip with Cavity
T00-048 Effects of Heat Source Arrangements on Marangoni Convection in Electrostatically Levitated Droplets

Viscous Non-Boundary-Layer Flows

T00-077 Measurements and Predictions of Turbulent Natural Convection Adjacent to Backward-Facing Step

Interdisciplinary Topics

Analytical and Numerical Methods

T00-022 Revised Interpretation of Work Potential in Thermophysical Processes

Atmospheric and Space Sciences

T00-047 Heat Transfer Coefficient Measurement on Iced Airfoil in Small Icing Wind Tunnel

Lasers and Laser Applications

T00-051 Cooling Mechanism of Expanding Plasmas Produced by Optical-Field-Induced Ionization
T00-026 Temperature Measurements by Ultraviolet Filtered Rayleigh Scattering Using a Mercury Filter

Research Facilities and Instrumentation

T00-031 New Inductively Heated Plasma Source for Reentry Simulations

Launch Vehicle and Missile (LV/M) Technology

Thermal Protection Systems

T00-017 Determination of Spectral Radiative Properties of Open Cell Foam: Model Validation

Propulsion

Airbreathing Propulsion

T00-024 Film Cooling Measurements on Cylindrical Models with Simulated Thermal Barrier Coating Spallation
T00-039 Impingement Heat Transfer Measurements Under an Array of Inclined Jets
T00-023 Impingement Heat Transfer on Dimpled Surfaces Using a Transient Liquid Crystal Technique

Ignition and Ignitor Design

T00-035 Effect of Dual-Phase-Lag Heat Conduction on Ignition of a Solid

Space Technology

Aerobraking Configurations/Aerothermodynamics

T00-062 Thermochemical Relaxation Through Collisions and Radiation

Space Experiments

T00-048 Effects of Heat Source Arrangements on Marangoni Convection in Electrostatically Levitated Droplets

Space Processing

T00-035 Effect of Dual-Phase-Lag Heat Conduction on Ignition of a Solid

Spacecraft Contamination/Sterilization

T00-063 Modeling of Glow Radiation in the Rarefied Flow about an Orbiting Spacecraft

Spacecraft Data Sensing, Processing, and Transmission

T00-063 Modeling of Glow Radiation in the Rarefied Flow about an Orbiting Spacecraft

Spacecraft Thermal Management

T00-012 Capillary Pumped-Loop Thermal Performance Improvement with Electrohydrodynamic Technique
T00-019 Thermal Analysis and Design of an Advanced Space Suit

Structural Mechanics and Materials

Thermal Effects

T00-042 Temperature-Dependent Reflectance of Plated Metals and Composite Materials Under Laser Irradiation

Thermophysics and Heat Transfer

Ablation, Pyrolysis, Thermal Decomposition, and Degradation

T00-056 Ablation Onset in Unsteady Hypersonic Flow About Nose Tip with Cavity
T00-072 Two-Dimensional Ablation in Cylindrical Geometry

Aerothermodynamics/Thermal Protection

T00-033 Collision Integrals of High-Temperature Air Species
T00-061 Effect of Fence on Linear Aerospike Plume-Induced Base-Heating Physics
T00-005 Experimental Investigation of Surface Reactions in Carbon Monoxide and Oxygen Mixtures
T00-024 Film Cooling Measurements on Cylindrical Models with Simulated Thermal Barrier Coating Spallation
T00-039 Impingement Heat Transfer Measurements Under an Array of Inclined Jets
T00-066 Influence of Multipolar and Induction Interactions on the Speed of Sound
T00-055 Model for Heterogeneous Catalysis on Metal Surfaces with Applications to Hypersonic Flows
T00-032 Navier—Stokes Computation of Flows in Arc Heaters
T00-025 Near-Wall Second-Moment Closure for Rotating Multiple-Pass Cooling Channels
T00-069 Thermal Behavior of Porous Plates Subjected to Air Blowing
T00-072 Two-Dimensional Ablation in Cylindrical Geometry

Boiling/Condensation

T00-013 Effects of Heater Orientation and Confinement on Liquid Nitrogen Pool Boiling
T00-011 Graetz Problem for the Conjugated Conduction-Film Condensation Process

Computational Heat Transfer

T00-045 Analysis of Transient Conjugate Heat Transfer to a Free Impinging Jet
T00-065 Analytical Models for Electron-Vibration Coupling in Nitrogen Plasma Flows
T00-036 Band Lumping Strategy for Radiation Heat Transfer Calculations Using a Narrowband Model
T00-061 Effect of Fence on Linear Aerospike Plume-Induced Base-Heating Physics
T00-049 Effective Permeability for Natural Convection in a Layered Porous Annulus

T00-052 Energy Partitions in Inductively Heated Plasma Sources for Reentry Simulations
T00-080 Enhancement of Natural Convection by Eccentricity of Power Cable Inside Underground Conduit
T00-015 Forced Convection Heat Transfer to Phase Change Material Slurries in Circular Ducts
T00-020 Investigations on Transient and Steady-State Performance of a Micro Heat Pipe
T00-077 Measurements and Predictions of Turbulent Natural Convection Adjacent to Backward-Facing Step
T00-040 Modified YIX Method and Pseudoadaptive Angular Quadrature for Ray Effects Mitigation
T00-073 Natural Convection Simulation Inside the Underground Conduit of an Electrical Power Cable
T00-025 Near-Wall Second-Moment Closure for Rotating Multiple-Pass Cooling Channels
T00-021 Thermal Analysis During Continuous Casting Process Using Effective Heat Capacity Method
T00-046 Transient Analysis of Forced Convection Along a Wavy Surface in Micropolar Fluids
T00-009 Transient Coupled Radiation and Conduction in an Absorbing and Scattering Composite Layer
T00-083 Variational-Iterative Method for Conductive-Radiative Heat Transfer in Spherical Inhomogeneous Medium

Cryogenics

T00-004 Calculation of the Speed of Sound and Other Thermophysical Properties
T00-013 Effects of Heater Orientation and Confinement on Liquid Nitrogen Pool Boiling
T00-059 Mass-Flux and Shock Calculations Through Cryogenic Homogeneous Two-Phase Nozzle Flow
T00-018 Variations of Acoustic and Diffuse Mismatch Models in Predicting Thermal-Boundary Resistance

Electronics Cooling

T00-045 Analysis of Transient Conjugate Heat Transfer to a Free Impinging Jet
T00-013 Effects of Heater Orientation and Confinement on Liquid Nitrogen Pool Boiling
T00-014 Efficiency of a Constant-Area, Adiabatic Tip, Heat Pipe Fin
T00-071 Enhancement of Thermal Contact Conductance: Effect of Metallic Coating
T00-020 Investigations on Transient and Steady-State Performance of a Micro Heat Pipe
T00-038 Thermal Contact Conductance of Metal/Polymer Joints

Forced Convection

T00-024 Film Cooling Measurements on Cylindrical Models with Simulated Thermal Barrier Coating Spallation
T00-015 Forced Convection Heat Transfer to Phase Change Material Slurries in Circular Ducts
T00-047 Heat Transfer Coefficient Measurement on Iced Airfoil in Small Icing Wind Tunnel
T00-039 Impingement Heat Transfer Measurements Under an Array of Inclined Jets
T00-023 Impingement Heat Transfer on Dimpled Surfaces Using a Transient Liquid Crystal Technique
T00-076 Passive Control of Convective Transport Phenomena Utilizing an Attached-Detached Rib-Array
T00-075 Robust Heat Transfer Correlation for Turbulent Gas-Liquid Flow in Vertical Pipes
T00-069 Thermal Behavior of Porous Plates Subjected to Air Blowing
T00-046 Transient Analysis of Forced Convection Along a Wavy Surface in Micropolar Fluids

Heat Conduction

T00-035 Effect of Dual-Phase-Lag Heat Conduction on Ignition of a Solid
T00-014 Efficiency of a Constant-Area, Adiabatic Tip, Heat Pipe Fin
T00-071 Enhancement of Thermal Contact Conductance: Effect of Metallic Coating
T00-011 Graetz Problem for the Conjugated Conduction-Film Condensation Process
T00-079 Irreversible Thermal-Diffusional Coupling in Local Equilibrium
T00-037 Non-Fourier Heat-Flux Law for Diatomic Gases
T00-044 Thermal Characterization of Aerospace Structures
T00-009 Transient Coupled Radiation and Conduction in an Absorbing and Scattering Composite Layer
T00-018 Variations of Acoustic and Diffuse Mismatch Models in Predicting Thermal-Boundary Resistance

Heat Pipes

T00-012 Capillary Pumped-Loop Thermal Performance Improvement with Electrohydrodynamic Technique
T00-020 Investigations on Transient and Steady-State Performance of a Micro Heat Pipe

Laser Interaction

T00-067 Multidimensional Monte Carlo Simulation of Short-Pulse Laser Transport in Scattering Media
T00-026 Temperature Measurements by Ultraviolet Filtered Rayleigh Scattering Using a Mercury Filter
T00-042 Temperature-Dependent Reflectance of Plated Metals and Composite Materials Under Laser Irradiation

Melting/Solidification

T00-015 Forced Convection Heat Transfer to Phase Change Material Slurries in Circular Ducts
T00-082 Freezing Couette Flow in an Annulus with Translating Outer Sleeve
T00-021 Thermal Analysis During Continuous Casting Process Using Effective Heat Capacity Method

Mixed Convection

T00-059 Mass-Flux and Shock Calculations Through Cryogenic Homogeneous Two-Phase Nozzle Flow

Natural Convection

T00-049 Effective Permeability for Natural Convection in a Layered Porous Annulus
T00-080 Enhancement of Natural Convection by Eccentricity of Power Cable Inside Underground Conduit
T00-073 Natural Convection Simulation Inside the Underground Conduit of an Electrical Power Cable

Nonintrusive Diagnostics

T00-058 Inverse Radiation Problem in Axisymmetric Free Flames
T00-026 Temperature Measurements by Ultraviolet Filtered Rayleigh Scattering Using a Mercury Filter

Radiation in Participating Media

T00-036 Band Lumping Strategy for Radiation Heat Transfer Calculations Using a Narrowband Model
T00-017 Determination of Spectral Radiative Properties of Open Cell Foam: Model Validation
T00-061 Effect of Fence on Linear Aerospike Plume-Induced Base-Heating Physics
T00-058 Inverse Radiation Problem in Axisymmetric Free Flames
T00-053 Modeling of Gas Cloud Expansion at High Altitude with Radiation Transport
T00-040 Modified YIX Method and Pseudoadaptive Angular Quadrature for Ray Effects Mitigation
T00-067 Multidimensional Monte Carlo Simulation of Short-Pulse Laser Transport in Scattering Media
T00-009 Transient Coupled Radiation and Conduction in an Absorbing and Scattering Composite Layer

Radiation Interchange Between Surfaces

T00-008 Accurate Determination of View Factors in Axisymmetric Enclosures with Shadowing Bodies Inside

Thermal Control

T00-012 Capillary Pumped-Loop Thermal Performance Improvement with Electrohydrodynamic Technique
T00-071 Enhancement of Thermal Contact Conductance: Effect of Metallic Coating
T00-076 Passive Control of Convective Transport Phenomena Utilizing an Attached-Detached Rib-Array
T00-019 Thermal Analysis and Design of an Advanced Space Suit
T00-038 Thermal Contact Conductance of Metal/Polymer Joints

Thermal Modeling and Analysis

T00-045 Analysis of Transient Conjugate Heat Transfer to a Free Impinging Jet
T00-065 Analytical Models for Electron-Vibration Coupling in Nitrogen Plasma Flows
T00-003 Coupled Dual Reciprocity Boundary Element/Finite Volume Method for Transient Conjugate Heat Transfer
T00-082 Freezing Couette Flow in an Annulus with Translating Outer Sleeve
T00-079 Irreversible Thermal-Diffusional Coupling in Local Equilibrium
T00-037 Non-Fourier Heat-Flux Law for Diatomic Gases
T00-022 Revised Interpretation of Work Potential in Thermophysical Processes
T00-019 Thermal Analysis and Design of an Advanced Space Suit
T00-069 Thermal Behavior of Porous Plates Subjected to Air Blowing
T00-044 Thermal Characterization of Aerospace Structures
T00-072 Two-Dimensional Ablation in Cylindrical Geometry

T00-083 Variational-Iterative Method for Conductive-Radiative Heat Transfer in Spherical Inhomogeneous Medium
T00-018 Variations of Acoustic and Diffuse Mismatch Models in Predicting Thermal-Boundary Resistance

Thermochemistry and Chemical Kinetics

T00-033 Collision Integrals of High-Temperature Air Species
T00-002 Computational Study of Vibrationally Relaxing Gas past Blunt Body in Hypersonic Flows
T00-005 Experimental Investigation of Surface Reactions in Carbon Monoxide and Oxygen Mixtures
T00-060 Influence of O2 (v)+N=NO+O on NO Formation in One-Dimensional Air Nozzle Flow
T00-063 Modeling of Glow Radiation in the Rarefied Flow about an Orbiting Spacecraft
T00-064 Potential Energies and Collision Integrals for Interactions of Carbon and Nitrogen Atoms
T00-062 Thermochemical Relaxation Through Collisions and Radiation

Thermophysical Properties

T00-004 Calculation of the Speed of Sound and Other Thermohysical Properties
T00-033 Collision Integrals of High-Temperature Air Species
T00-054 Gas Dynamic Equations, Transport Coefficients, and Effects in Nonequilibrium Diatomic Gas Flows
T00-066 Influence of Multipolar and Induction Interactions on the Speed of Sound
T00-079 Irreversible Thermal-Diffusional Coupling in Local Equilibrium
T00-059 Mass-Flux and Shock Calculations Through Cryogenic Homogeneous Two-Phase Nozzle Flow
T00-037 Non-Fourier Heat-Flux Law for Diatomic Gases
T00-064 Potential Energies and Collision Integrals for Interactions of Carbon and Nitrogen Atoms
T00-022 Revised Interpretation of Work Potential in Thermophysical Processes
T00-042 Temperature-Dependent Reflectance of Plated Metals and Composite Materials Under Laser Irradiation
T00-044 Thermal Characterization of Aerospace Structures
T00-038 Thermal Contact Conductance of Metal/Polymer Joints

Author Index

Abu-Mulaweh, H. I., T00–077
Abulwafa, E. M., T00–083
Agrawal, Lokesh, T00–081
Akmandor, Ibrahim Sinan, T00–059
Ali, Abdulmuhsen H., T00–037, T00–079
Alisetti, Edwin L., T00–015
Amin, M. Ruhul, T00–021
Antaki, Paul J., T00–035
Arefin Kabir, A. A. S., T00–010
Armaly, B. F., T00–077
Auweter-Kurtz, M., T00–031, T00–052
Avsec, Jurij, T00–004, T00–066
Azad, Gm. S., T00–023
Baillis, D., T00–017
Barbato, M., T00–055
Bataille, Françoise, T00–069
Bautista, O., T00–011
Bellettre, Jérôme, T00–069
Besson, M., T00–007
Bourdon, A., T00–065
Bouveret, André, T00–047
Bowman, W. Jerry, T00–014
Boyd, Iain D., T00–050
Broach, Kirk, T00–010
Bruel, P., T00–007
Bruno, C., T00–055
Bula, Antonio J., T00–045
Cai, Chunpei, T00–050
Camberos, José A., T00–022, T00–057
Campbell, Anthony B., T00–019
Candler, Graham V., T00–030, T00–050
Capitelli, M., T00–033, T00–060
Cavalleri, Robert J., T00–003
Champion, J. L., T00–007
Chang, Keh-Chin, T00–073, T00–080
Chao, Chung-Hsin, T00–076
Chen, Cha'o-Kuang, T00–046
Chen, Hamn Ching, T00–025
Chen, Ruey-Hung, T00–013
Chen, T. S., T00–077
Chen, Yih-Kanq, T00–005
Cheng, Ping, T00–074
Chow, Louis C., T00–013
Chung, B. T. F., T00–041
Collins, R. J., T00–063
Colonna, G., T00–060
Copeland, Richard A., T00–005
Couto, Paulo, T00–043
Cunnington, George R., T00–016
Dailey, P., T00–048
Daryabeigi, K., T00–044
Das, S. K., T00–072
De Bellis, Lisa, T00–018
de Socio, L. M., T00–034
Del Vecchio, Antonio, T00–027
Deshaies, B., T00–007
Dessiatoun, S. V., T00–012
Dogra, Virendra K., T00–053
Dougherty, Ronald L., T00–075
Ekkad, S. V., T00–024
Ekkad, Srinath V., T00–039
El-Wakil, S. A., T00–083
Erlandson, Robert E., T00–053
Ern, Alexandre, T97–004
Fan, Jing, T00–050
Freeman, Robert K., T00–042
French, Johnathan D. , T00–019
Frühauf, H.-H., T00–062
Fuller, J. J., T00–038
Ganiev, Y. C., T00–001
Garnier, François, T00–047
Ghajar, Afshin J., T00–075
Gimelshein, S. F., T00–063
Giordano, D., T00–033, T00–060
Giovangigli, Vincent, T97–004
Goldstein, David B., T00–056
Gordeev, V. P., T00–001
Gorse, C., T00–033
Gu, Chuanbao, T00–013
Guffond, Didier, T00–047
Gülder, Ömer L., T00–036
Gulhan, Ali, T00–027
Guo, Zhixiong, T00–067
Hall, III, Carsie A., T00–082
Han, J. C., T00–024
Han, Je-Chin, T00–023, T00–039, T00–025
Hanuska, A. R., T00–044
Heiermann, J., T00–052
Henry, Rorbert C., T00–047
Herdrich, G., T00–031
Hiers, III, Robert S., T00–006
Hsu, P.-F., T00–040
Huang, Yizhe, T00–023, T00–039
Hwang, Jenn-Jiang, T00–076
Ianiro, N., T00–034
Izawa, Yoshinori, T00–029
Jang, Yong-Jun, T00–025
Josyula, Eswar, T00–002
Kanne, S., T00–062
Kassab, Alain J., T00–003
Katte, Subrahmanya S., T00–008, T00–072
Khan, Jamil A., T00–010
Kim, Dongwoo, T00–075
Kim, Kyu Hong, T00–032
Koch, Uwe, T00–027
Krasilnikov, A. V., T00–001
Kumar, Sunil, T00–067
Kurtz, H., T00–031
Lagutin, V. I., T00–001
Lai, F. C., T00–049
Lallemand, André, T00–069
Lee, Siu-Chun, T00–016
Leland, John E., T00–045
Lenzner, S., T00–052
Leonardi, Eddie, T00–071
Levin, D. A., T00–063
Levin, Deborah A., T00–030
Levin, Eugene, T00–064
Li, A., T00–077
Li, B. Q., T00–048
Li, Ying Ze, T00–071
Limbaugh, Charles C., T00–030
Lin, Chin H., T00–019
Liu, Fengshan, T00–036
Liu, L. H., T00–058
Liu, Lin-Hua, T00–068
Longo, S., T00–033
Lu, Guoqiang, T00–074
Mackie, Calvin, T00–082
Madhusudana, C. V., T00–071
Mandal, J. C., T00–081
Mantelli, Marcia B. H., T00–043
Marathe, A. G., T00–081
Marcic, Milan, T00–004, T00–066
Marino, L., T00–034
Marotta, E. E., T00–038
Marschall, Jochen, T00–005
Maynes, D., T00–014
Méndez, F., T00–011
Meng, C.-I., T00–053
Messerschmid, E. W., T00–062
Miles, John B., T00–019
Miles, Richard B., T00–026
Mizuno, Hiroyasu, T00–028
Mo, B., T00–012
Morley, Nicholas, T00–042
Moss, T. W., T00–014
Muylaert, J., T00–055
Nagashima, Toshio, T00–059
Nair, Satish S., T00–019
Nanbu, Kenichi, T00–051
Nance, Robert P., T00–053
Ngo, C. C., T00–049
Nguyen, Duong N. T., T00–013
Nonaka, Satoshi, T00–028
Nowak, Robert J., T00–070
Ohadi, M. M., T00–012
Otmennikov, V. N., T00–001
Palumbo, Giuseppe, T00–027
Panasenko, A. V., T00–001
Papadopoulos, George, T00–078
Park, Chul, T00–028, T00–032
Partridge, Harry, T00–064
Paulson, K. A., T00–014
Perkins, Judy A., T00–082
Phelan, Patrick E., T00–018
Pradhan, Atul, T00–064
Prasher, Ravi S., T00–018
Rahaim, Christopher P., T00–003
Rahman, Muhammad M., T00–045
Raynaud, M., T00–017
Reggiani, S., T00–055
Rho, Oh Hyun, T00–032
Riabov, Vladimir V., T00–054
Rigby, Fred A., T00–042
Rodet, Jean-Claude, T00–069
Roy, Sanjay K., T00–015
Sacadura, J. F., T00–017
San, Kuo-Ching, T00–067
Sawada, Keisuke, T00–029
Scott, E. P., T00–044
Scott, Elaine P., T00–070
Sepka, Steven, T00–005
Silton, Sidra I., T00–056
Sleziona, P. C., T00–052
Smallwood, Gregory J., T00–036
Sobhan, C. B., T00–020
Song, S. P., T00–048
Stallcop, James R., T00–064
Swaminathan, P. K., T00–053
Takayama, Kazuyoshi, T00–028
Tan, H. P., T00–058
Tan, He-Ping, T00–009, T00–068
Tan, Z.-M., T00–040
Taylor, Jeff C., T00–053
Tong, Timothy W., T00–068
Treviño, C., T00–011
Tuttafesta, M., T00–060
Venkateshan, S. P., T00–008, T00–072
Vervisch, P., T00–065
Walker, D. Greg, T00–070
Wang, Chi-Chang, T00–046
Wang, G.-X., T00–041
Wang, Ping-Yang, T00–009, T00–068
Wang, Ten-See, T00–061
Wrenn, K. R., T00–012
Wu, C.-Y., T00–040
Wu, S.-H., T00–040
Xia, Xin-Lin, T00–099
Xiaoyang, Huang, T00–020
Yalin, Azer P., T00–026
Yao, Chengcai, T00–041
Yeh, Chun-Lang, T00–073, T00–080
Yonemura, Shigeru, T00–051
Yu, Liu Chang, T00–020
Yu, Q. Z., T00–058

Chronological Index

T97-004 Different Levels of Modeling for Diffusion Phenomena in Neutral and Ionized Mixtures. C. Desmeuzes, G. Duffa, and B. Dubroca, *CEA/CESTA, France* (**11**, 1, p. 36) Article
Technical Comment by Alexandre Ern, *CERMICS, France*; and Vincent Giovangigli, *Centre National de la Recherche Scientifique, France*; (**14**, 1, p. 119)

T00-001 Aerodynamic Drag Reduction by Plasma and Hot-Gas Injection. Y. C. Ganiev, V. P. Gordeev, A. V. Krasilnikov, V. I. Lagutin, V. N. Otmennikov, and A. V. Panasenko, *Central Research Institute of Machine Building, Russian Space Agency* (**14**, 1, p. 10) Article based on AIAA Paper 99-0603

T00-002 Computational Study of Vibrationally Relaxing Gas past Blunt Body in Hypersonic Flows. Eswar Josyula, *U.S. Air Force Research Laboratory* (**14**, 1, p. 18) Article based on AIAA Paper 99-0866

T00-003 Coupled Dual Reciprocity Boundary Element/Finite Volume Method for Transient Conjugate Heat Transfer. Christopher P. Rahaim, *Science Applications International Corporation*; Alain J. Kassab, *University of Central Florida*; and Robert J. Cavalleri, *Applied Technology Associates, Inc.* (**14**, 1, p. 27) Article based on AIAA Paper 97-2487

T00-004 Calculation of the Speed of Sound and Other Thermophysical Properties. Jurij Avsec and Milan Marčič, *University of Maribor, Slovenia* (**14**, 1, p. 39) Article

T00-005 Experimental Investigation of Surface Reactions in Carbon Monoxide and Oxygen Mixtures. Steven Sepka, Yih-Kanq Chen, and Jochen Marschall, *NASA Ames Research Center*; and Richard A. Copeland, *SRI International* (**14**, 1, p. 45) Article based on AIAA Paper 99-3629

T00-006 Critical Behavior in Small Particle Combustion. Robert S. Hiers III, *Sverdrup Technology, Inc.* (**14**, 1, p. 53) Article based on AIAA Paper 99-0977

T00-007 Experimental Analysis of Combusting Flows Developing over a Plane- Symmetric Expansion. M. Besson, P. Bruel, J. L. Champion, and B. Deshaies, *Centre National de la Recherche Scientifique, France* (**14**, 1, p. 59) Article based on AIAA Paper 99-0412

T00-008 Accurate Determination of View Factors in Axisymmetric Enclosures with Shadowing Bodies Inside. Subrahmanya S. Katte and S. P. Venkateshan, *Indian Institute of Technology* (**14**, 1, p. 68) Article

T00-009 Transient Coupled Radiation and Conduction in an Absorbing and Scattering Composite Layer. He-Ping Tan, Ping-Yang Wang, and Xin-Lin Xia, *Harbin Institute of Technology, PRC* (**14**, 1, p. 77) Article

T00-010 Numerical Thermal Model of Resistance Spot Welding in Aluminum. Jamil A. Khan and Kirk Broach, *University of South Carolina*; and A. A. S. Arefin Kabir, *ESAB Welding and Cutting Products* (**14**, 1, p. 88) Article

T00-011 Graetz Problem for the Conjugated Conduction-Film Condensation Process. O. Bautista, F. Méndez, and C. Treviño, *Universidad Nacional Autonoma de Mexico* (**14**, 1, p. 96) Article

T00-012 Capillary Pumped-Loop Thermal Performance Improvement with Electrohydrodynamic Technique. B. Mo, M. M. Ohadi, and S. V. Dessiatoun, *University of Maryland*; and K. R. Wrenn, *Swales Aerospace* (**14**, 1, p. 103) Article

T00-013 Effects of Heater Orientation and Confinement on Liquid Nitrogen Pool Boiling. Duong N. T. Nguyen, Ruey-Hung Chen, Louis C. Chow, and Chuanbao Gu, *University of Central Florida* (**14**, 1, p. 109) Technical Note

T00-014 Efficiency of a Constant-Area, Adiabatic Tip, Heat Pipe Fin. W. J. Bowman, T. W. Moss, D. Maynes, and K. A. Paulson, *Brigham Young University* (**14**, 1, p. 112) Technical Note

T00-015 Forced Convection Heat Transfer to Phase Change Material Slurries in Circular Ducts. Edwin L. Alisetti and Sanjay K. Roy, *University of Miami* (**14**, 1, p. 115) Technical Note

T00-016 Conduction and Radiation Heat Transfer in High-Porosity Fiber Thermal Insulation. Siu-Chun Lee and George R. Cunnington, *Applied Sciences Laboratory, Inc.* (**14**, 2, p. 121) Survey Paper

T00-017 Determination of Spectral Radiative Properties of Open Cell Foam: Model Validation. D. Baillis, M. Raynaud, and J. F. Sacadura, *Centre National de la Recherche Scientifique, France* (**14**, 2, p. 137) Article

T00-018 Variations of Acoustic and Diffuse Mismatch Models in Predicting Thermal-Boundary Resistance. Lisa De Bellis and Patrick E. Phelan, *Arizona State University*; and Ravi S. Prasher, *Intel Corporation* (**14**, 2, p. 144) Article

T00-019 Thermal Analysis and Design of an Advanced Space Suit. Anthony B. Campbell, Johnathan D. French, Satish S. Nair, and John B. Miles, *University of Missouri*; and Chin H. Lin, *NASA Johnson Space Center* (**14**, 2, p. 151) Article

T00-020 Investigations on Transient and Steady-State Performance of a Micro Heat Pipe. C. B. Sobhan, Huang Xiaoyang, and Liu Chang Yu, *Nanyang Technological University, Singapore* (**14**, 2, p. 161) Article

T00-021 Thermal Analysis During Continuous Casting Process Using Effective Heat Capacity Method. M. Ruhul Amin, *Montana State University* (**14**, 2, p. 170) Article

T00-022 Revised Interpretation of Work Potential in Thermophysical Processes. José A. Camberos, *U.S. Air Force Research Laboratory* (**14**, 2, p. 177) Article

T00-023 Impingement Heat Transfer on Dimpled Surfaces Using a Transient Liquid Crystal Technique. Gm. S. Azad, Yizhe Huang, and Je-Chin Han, *Texas A&M University* (**14**, 2, p. 186) Article

T00-024 Film Cooling Measurements on Cylindrical Models with Simulated Thermal Barrier Coating Spallation. S. V. Ekkad, *Louisiana State University*; and J. C. Han, *Texas A&M University* (**14**, 2, p. 194) Article

T00-025 Near-Wall Second-Moment Closure for Rotating Multiple-Pass Cooling Channels. Hamn-Ching Chen, Yong-Jun Jang, and Je-Chin Han, *Texas A&M University* (**14**, 2, p. 201) Article based on AIAA Paper 99-3626

T00-026 Temperature Measurements by Ultraviolet Filtered Rayleigh Scattering Using a Mercury Filter. Azer P. Yalin and Richard B. Miles, *Princeton University* (**14**, 2, p. 210) Article

T00-027 Temperature Measurements by Laser-Induced Fluorescence Spectroscopy in Nonequilibrium High-Enthalpy Flow. Antonio Del Vecchio and Giuseppe Palumbo, *Centro Italiano*

Ricerche Aerospaziale; and Uwe Koch and Ali Gülhan, *DLR, German Aerospace Research Center* (**14**, 2, p. 216) Article based on AIAA Paper 99-3598

T00-028 Measurement of Shock Standoff Distance for Sphere in Ballistic Range. Satoshi Nonaka, Hiroyasu Mizuno, Kazuyoshi Takayama, and Chul Park, *Tohoku University* (**14**, 2, p. 225) Article based on AIAA Paper 97-0563

T00-029 Calculation of Surface Heat Transfer for a Sphere with Wall Injection. Yoshinori Izawa and Keisuke Sawada, *Tohoku University, Japan* (**14**, 2, p. 230) Article based on AIAA Paper 99-0734

T00-030 Multispectral Shock-Layer Radiance from a Hypersonic Slender Body. Deborah A. Levin, *George Washington University*; Graham V. Candler, *University of Minnesota*; and Charles C. Limbaugh, *Sverdrup Technology Inc.* (**14**, 2, p. 237) Article

T00-031 New Inductively Heated Plasma Source for Reentry Simulations. G. Herdrich, M. Auweter-Kurtz, and H. Kurtz, *University of Stuttgart, Germany* (**14**, 2, p. 244) Article

T00-032 Navier–Stokes Computation of Flows in Arc Heaters. Kyu Hong Kim and Oh Hyun Rho, *Seoul National University, Korea*; and Chul Park, *NASA Ames Research Center* (**14**, 2, p. 250) Article

T00-033 Collision Integrals of High-Temperature Air Species. M. Capitelli, C. Gorse, and S. Longo, *Università degli Studi di Bari, Italy*; and D. Giordano, *European Space Research and Technology Center, The Netherlands* (**14**, 2, p. 259) Article based on AIAA Paper 98-2936

T00-034 Effects of the Centrifugal Forces on a Gas Between Rotating Cylinders. L. M. de Socio, N. Ianiro, and L. Marino, *University of Rome "La Sapienza," Italy* (**14**, 2, p. 269) Article

T00-035 Effect of Dual-Phase-Lag Heat Conduction on Ignition of a Solid. Paul J. Antaki, *Antaki & Associates, Inc.* (**14**, 2, p. 276) Technical Note

T00-036 Band Lumping Strategy for Radiation Heat Transfer Calculations Using a Narrowband Model. Fengshan Liu, Gregory J. Smallwood, and Ömer L. Gülder, *National Research Council, Canada* (**14**, 2, p. 278) Technical Note

T00-037 Non-Fourier Heat-Flux Law for Diatomic Gases. Abdulmuhsen H. Ali, *Kuwait University* (**14**, 2, p. 281) Technical Note

T00-038 Thermal Contact Conductance of Metal/Polymer Joints. J. J. Fuller and E. E. Marotta, *Clemson University* (**14**, 2, p. 283) Technical Note

T00-039 Impingement Heat Transfer Measurements Under an Array of Inclined Jets. Srinath Ekkad, *Louisiana State University*; and Yizhe Huang and Je-Chin Han, *Texas A&M University* (**14**, 2, p. 286) Technical Note

T00-040 Modified YIX Method and Pseudoadaptive Angular Quadrature for Ray Effects Mitigation. Z.-M. Tan, *South China University of Technology* ; P.-F. Hsu, *Florida Institute of Technology*; S.-H. Wu, *National Cheng-Kung University, Taiwan, ROC*; C.-Y. Wu, *National Cheng-Kung University, Taiwan, ROC* (**14**, 3, p. 289) Article

T00-041 Nonequilibrium Planar Interface Model for Solidification of Semitransparent Radiating Materials. Chengcai Yao, G.-X. Wang, a nd B. T. F. Chung, *University of Akron* (**14**, 3, p. 297) Article

T00-042 Temperature-Dependent Reflectance of Plated Metals and Composite Materials Under Laser Irradiation. Robert K. Freeman and Fred A. Rigby, *Science Applications International Corporation*; Nicholas Morley, *U.S. Air Force Research Laboratory* (**14**, 3, p. 305) Article based on AIAA Paper 98-2482

T00-043 Transient Temperature Behavior of Multistage Cryogenic Radiators: Modeland Experimental Validation. Paulo Couto and Marcia B. H. Mantelli, *Federal University of Santa Catarina, Brazil* (**14**, 3, p. 313) Article

T00-044 Thermal Characterization of Aerospace Structures. A. R. Hanuska, *E.I. DuPont, Inc.*; E. P. Scott, *University of Utah*; K. Daryabeigi, *NASA Langley Research Center* (**14**, 3, p. 322) Article

T00-045 Analysis of Transient Conjugate Heat Transfer to a Free Impinging Jet. Muhammad M. Rahman and Antonio J. Bula, *University of South Florida*; John E. Leland, *U.S. Air Force Research Laboratory* (**14**, 3, p. 330) Article

T00-046 Transient Analysis of Forced Convection Along a Wavy Surface in Micropolar Fluids. Cha'o-Kuang Chen and Chi-Chang Wang, *National Cheng-Kung University, PRC* (**14**, 3, p. 340) Article

T00-047 Heat Transfer Coefficient Measurement on Iced Airfoil in Small Icing Wind Tunnel. Rorbert C. Henry, Didier Guffond, François Garnier, *and* André Bouveret, *ONERA, France* (**14**, 3, p. 348) Article

T00-048 Effects of Heat Source Arrangements on Marangoni Convection in Electrostatically Levitated Droplets. S. P. Song, P. Dailey, and B. Q. Li, *Washington State University* (**14**, 3, p. 355) Article

T00-049 Effective Permeability for Natural Convection in a Layered Porous Annulus. C. C. Ngo, *University of Oklahoma*; F. C. Lai, *Univeristy of Oklahoma*; (**14**, 3, p. 363) Article based on AIAA Paper 98-2676

T00-050 Direct Simulation Methods for Low-Speed Microchannel Flows. Chunpei Cai, Iain D. Boyd, and Jing Fan, *Cornell University*; Graham V. Candler, *University of Minnesota* (**14**, 3, p. 368) Article

T00-051 Cooling Mechanism of Expanding Plasmas Produced by Optical-Field-Induced Ionization. Shigeru Yonemura and Kenichi Nanbu, *Tohoku University, Japan* (**14**, 3, p. 379) Article

T00-052 Energy Partitions in Inductively Heated Plasma Sources for Reentry Simulations. S. Lenzner, *Institute für Raumfahrtsysteme*, Germany; M. Auweter-Kurtz *and* J. Heiermann, *University of Stuttgart, Germany*; P. C. Sleziona, *Institut für Technound Wirtschaftsmathematik, Germany* (**14**, 3, p. 388) Article based on AIAA Paper 98-2947

T00-053 Modeling of Gas Cloud Expansion at High Altitude with Radiation Transport. Virendra K. Dogra, Robert P. Nance, P. K. Swaminathan, Robert E. Erlandson, and C.-I. Meng, *The Johns Hopkins University* (**14**, 3, p. 396) Article based on AIAA Paper 99-3561

T00-054 Gas Dynamic Equations, Transport Coefficients, and Effects in Nonequilibrium Diatomic Gas Flows. Vladimir V. Riabov, *University of New Hampshire* (**14**, 3, p. 404) Article

T00-055 Model for Heterogeneous Catalysis on Metal Surfaces with Applications to Hypersonic Flows. M. Barbato and S. Reggiani, *CRS4 Research Centre, Italy*; C. Bruno, *University of Rome "La Sapienza", Italy*; J. Muylaert, *ESA* (**14**, 3, p. 412) Article based on AIAA Paper 96-1902

T00-056 Ablation Onset in Unsteady Hypersonic Flow About Nose Tip with Cavity. Sidra I. Silton and David B. Goldstein, *University of Texas at Austin* (**14**, 3, p. 421) Article based on AIAA Paper 98-0169

T00-057 Nonlinear Time-Step Constraints Based on the Second Law of Thermodynamics. José A. Camberos, *U.S. Air Force Research Laboratory* (**14**, 3, p. 435) Article based on AIAA Paper 99-0558

T00-058 Inverse Radiation Problem in Axisymmetric Free Flames. L. H. Liu, H. P. Tan, and Q. Z. Yu, *Harbin Institute of Technology, PRC* (**14**, 3, p. 450) Technical Note

T00-059 Mass-Flux and Shock Calculations Through Cryogenic Homogeneous Two-Phase Nozzle Flow. I. Sinan Akmandor, *Middle East Technical University, Turkey*; Toshio Nagashima, *University of Tokyo, Japan*; (**14**, 3, p. 452) Technical Note based on AIAA Paper 99-0347

T00-060 Influence of O2 (v)+N=NO+O on NO Formation in One-Dimensional Air Nozzle Flow. G. Colonna, M. Tuttafesta, and M. Capitelli, *University of Bari, Italy*; D. Giordano, *ESA, The Netherlands* (**14**, 3, p. 455) Technical Note

T00-061 Effect of Fence on Linear Aerospike Plume-Induced Base-Heating Physics. Ten-See Wang, *NASA Marshall Space Flight Center* (**14**, 4, p. 457) Article based on AIAA Paper 99-3682

T00-062 Thermochemical Relaxation Through Collisions and Radiation. S. Kanne, H.-H. Frühauf, and E. W. Messerschmid, *University of Stuttgart, Germany* (**14**, 4, p. 464) Article

T00-063 Modeling of Glow Radiation in the Rarefied Flow About an Orbiting Spacecraft. S. F. Gimelshein and D. A. Levin, *George Washington University;* and R. J. Collins, *University of Minnesota* (**14**, 4, p. 471) Article

T00-064 Potential Energies and Collision Integrals for Interactions of Carbon and Nitrogen Atoms. James R. Stallcop and Harry Partridge, *NASA Ames Research Center;* Atul Pradhan, *SVG Lithography;* and Eugene Levin, *Eloret Corporation,* (**14**, 4, p. 480) Article

T00-065 Analytical Models for Electron-Vibration Coupling in Nitrogen Plasma Flows. A. Bourdon and P. Vervisch, *Centre National de la Recherche Scientifique, France* (**14**, 4, p. 489) Article

T00-066 Influence of Multipolar and Induction Interactions on the Speed of Sound. Jurij Avsec and Milan Marcic, *University of Maribor, Slovenia* (**14**, 4, p. 496) Article based on AIAA Paper 99-3677

T00-067 Multidimensional Monte Carlo Simulation of Short-Pulse Laser Transport in Scattering Media. Zhixiong Guo, Sunil Kumar, and Kuo-Ching San, *Polytechnic University* (**14**, 4, p. 504) Article

T00-068 Coupled Radiation and Conduction in a Scattering Composite Layer with Coatings. Ping-Yang Wang, He-Ping Tan, and Lin-Hua Liu, *Harbin Institute of Technology, PRC*; and Timothy W. Tong, *Colorado State University* (**14**, 4, p. 512) Article

T00-069 Thermal Behavior of Porous Plates Subjected to Air Blowing. Jérôme Bellettre, Françoise Bataille, Jean-Claude Rodet, and André Lallemand, *Institut National des Sciences Appliquées de Lyon, France* (**14**, 4, p. 523) Article

T00-070 Estimation Methods for Two-Dimensional Conduction Effects of Shock-Shock Heat Fluxes. D. Greg Walker, *Vanderbilt University;* Elaine P. Scott, *Virginia Polytechnic and State University;* and Robert J. Nowak, *NASA Langley Research Center* (**14**, 4, p. 533) Article

T00-071 Enhancement of Thermal Contact Conductance: Effect of Metallic Coating. Ying Ze Li, C. V. Madhusudana, and Eddie Leonardi, *University of New South Wales, Australia* (**14**, 4, p. 540) Article based on AIAA Paper 99-3492

T00-072 Two-Dimensional Ablation in Cylindrical Geometry. Subrahmanya S. Katte, S. K. Das, and S. P. Venkateshan, *Indian Institute of Technology, India* (**14**, 4, p. 548) Article

T00-073 Natural Convection Simulation Inside the Underground Conduit of an Electrical Power Cable. Chun-Lang Yeh, *National Huwei Institute of Technology, ROC* and Keh-Chin Chang, *National Cheng-Kung University, ROC* (**14**, 4, p. 557) Article

T00-074 Friction Factor and Nusselt Number for Thermoacoustic Transport Phenomena in a Tube. Guoqiang Lu and Ping Cheng, *Hong Kong University of Science and Technology, PRC* (**14**, 4, p. 566) Article

T00-075 Robust Heat Transfer Correlation for Turbulent Gas-Liquid Flow in Vertical Pipes. Dongwoo Kim, Afshin J. Ghajar, and Ronald L. Dougherty, *Oklahoma State University* (**14**, 4, p. 574) Article

T00-076 Passive Control of Convective Transport Phenomena Utilizing an Attached-Detached Rib-Array. Jenn-Jiang Hwang, *Chung-Hua University, ROC* and Chung-Hsin Chao, *Ta-Hwa Institute of Technology, ROC* (**14**, 4, p. 579) Article

T00-077 Measurements and Predictions of Turbulent Natural Convection Adjacent to Backward-Facing Step. B. F. Armaly, A. Li, H. I. Abu-Mulaweh, and T. S. Chen, *University of Missouri-Rolla* (**14**, 4, p. 584) Article

T00-078 Novel Shadow Image Velocimetry Technique for Inferring Temperature. George Papadopoulos, *Dantec Measurement Technology, Inc.* (**14**, 4, p. 593) Article based on AIAA Paper 2000-0374

T00-079 Irreversible Thermal-Diffusional Coupling in Local Equilibrium. Abdulmuhsen H. Ali, *Kuwait University, Kuwait* (**14**, 4, p. 601) Technical Note

T00-080 Enhancement of Natural Convection by Eccentricity of Power Cable Inside Underground Conduit. Chun-Lang Yeh, *National Huwei Institute of Technology, ROC* and Keh-Chin Chang, *National Cheng-Kung University, ROC* (**14**, 4, p. 604) Technical Note

T00-081 Computations of Incompressible Flows with Natural Convection Using Pseudocompressibility Approach. J. C. Mandal, Lokesh Agrawal and A. G. Marathe, *Indian Institute of Technology, India* (**14**, 4, p. 606) Technical Note based on AIAA Paper 98-2587

T00-082 Freezing Couette Flow in an Annulus with Translating Outer Sleeve. Carsie A. Hall III, *University of New Orleans*; Calvin Mackie, *Tulane University*; and Judy A. Perkins, *North Carolina A&T State University* (**14**, 4, p. 609) Technical Note

T00-083 Variational-Iterative Method for Conductive-Radiative Heat Transfer in Spherical Inhomogeneous Medium. S. A. El-Wakil and E. M. Abulwafa, *Mansoura University, Egypt* (**14**, 4, p. 612) Technical Note